

Water management: Including pre-sowing irrigation, 3-5 irrigations are sufficient for raising mustard + radish intercrops.

Weed management: Mustard + radish are a smothering combination for weeds. However, early flush of weeds can be easily managed by one manual weeding.

Plant protection:

- Early/timely sowing of mustard to avoid white rust
- Spray neem based insecticides for mustard aphid

Productivity and economics of maize (cob) - mustard + radish cropping system under organic cultivation (2006-07 to 2012-13)

Crop/System	Grain yield (kg/ha)			
	Conversion period		4 th year	5 th year
	Mean of first 2 years	3 rd year		
Maize(Cob)	6160	7583	8860	9060
Mustard + Radish	350+9580	518+11500	964+14200	642+14620
Maize (cob)-Mustard+Radish (Maize, cob equivalent yield)	16990	16990	25539	25973

The gross returns from the organic production of maize (cob) - mustard + radish system were ₹ 5,10,387/ha with ₹ 2,33,696/ha as cost.

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ORGANIC PACKAGE FOR MAIZE (COB) - MUSTARD + RADISH SYSTEM



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Dhaincha (Sesbania aculeata)

Sowing time: Second fortnight of April, after harvesting of mustard.

Seed rate & sowing: @ 20 kg/ha broadcasting in ploughed field followed by irrigation.

Water management: Besides the irrigation after sowing, 2-3 irrigations would be sufficient for getting proper biomass.

Incorporation: Plough down 50-55 days old crop into soil around 20 days before sowing of maize.



Water management: Depending upon the amount and frequency of rains during the growing season 3-4 irrigations are sufficient.

Weed management: Maize being widely spaced crop, weeds can be managed by 1-2 manual intercultural operations.

Plant protection:

Field release of Tricho-cards (*Tricogramma chilonis*) 3-4 times @ 30 cards/ha for stem borer.

Seed treatment with *Pseudomonas fluorescence* @ 4 kg/ha for stalk rot.

Maize (Cob)



Suitable varieties: Variety 'Star-56' and other low input requiring and resistant varieties to insect pest and diseases.

Sowing time: First week of July. To escape water logging maize should be sown on ridges in ridge and furrow system of sowing.

Seed rate: 20 kg/ha. Organically certified seed should be preferred for sowing.

Spacing: Row to row 60 cm and plant to plant 20 cm distance should be maintained.

Nutrient management:

Well rotten FYM @ 8.0 t/ha should be incorporated into the soil at least 20 days before sowing.

Vermicompost @ 4.0 t/ha is top dressed before second irrigation.

Biofertilizers like *Azotobactor* (nitrogen fixer) and Phosphorus Solublizing Bacteria (PSB) each should be added @10 kg/ha in soil after final land preparation.

Mustard + Radish



Suitable varieties: Mustard var. 'Pusa Bold' and radish variety 'Ivory White' and other low input requiring and resistant varieties to insect pest and diseases.

Sowing time: In maize (cob) - mustard + radish cropping system, mustard + radish can be sown optimally up to second week of October.

Seed rate: Optimum seed rate for sowing mustard and radish should be 4 kg and 10 kg/ha, respectively. Organically certified seed should be preferred for sowing.

Spacing: The mustard should be sown on the top of ridges made 45 cm apart keeping plant to plant spacing of 10 cm. On both sides of ridges, radish can be sown at 10 cm spacing in between the mustard plants.

Nutrient management:

Well rotten FYM @ 6.0 t/ha should be incorporated into the soil at least 20 days before sowing.

Vermicompost @ 2.0 t/ha is top dressed before second irrigation.

Biofertilizers like *Azotobactor* (nitrogen fixer) and Phosphorus Solublizing Bacteria (PSB) each should be added @10 kg/ha in soil after final land preparation.